STREAM ASSESSMENTS

Comments on the Methodologies

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OUTLINE

- PROJECTS
- SAAM
- SICAM
- SUMMARY

Project 1

	Linear Feet	SICAM (CR)	SAAM (scu's & lf)
Impact	508	646	1,590 scu's
Restoration Credit	227	113.5	606 scu's
Remaining Liability	281	532.5	984 scu's
			355 lf of mitigation remains
			355 lf or mitigation requires 1,029 lf of preservation
Preservation 1	415	78.5	415
Preservation 2	725	145	900
Preservation 3	1,100.00	200	1,192.50
Enhancement II	175.00	78	
Remaining Liability	2,134 (surplus)	31	1,487.5 lf (surplus)

Project 2

	Linear Feet	SICAM (CR)	SAAM (scu's & lf)
Impact P1	453	680	1,884 scu's
Impact P2	202	303	1,051 scu's
Impact P3	120	180	565 scu's
Impact T1	21	25	72 scu's
Totals	796	1,188	3572 scu's
			convert back to lf
Preservation Credit	710	101	163 lf
Enhancement Credit	657	321	228 lf
Restoration Credit	850	850	850 lf
Remaining Liability	1,421 (surplus)	84 (surplus)	309 (surplus)

SAAM

- Field form is easy enough to use. However, as known, there are great discrepancies in determining BFD.

SAAM

- Mitigation math is difficult and confusing to calculate/interpret, and requires additional mathematics to go between preservation, enhancement/restoration, with multiple reaches

SAAM

- For instance, if a project is impacting many different channels with different RCI's, can't lump all impacts together on one mitigation calculation form. Must input one impact, mitigate for that, then move onto another impact. This generates paperwork and confusion in terms of explaining to client.

SAAM

- There is a conversion from LF to SCU's back to LF. Is this necessary?
- Can't speak in terms of SCU's to clients. Clients need to understand the processes that govern them.
- Everything has to be converted back to LF in the end.

SAAM

- Stream mitigation is market driven. Currency is critically important.
- SCU's are a dimensionless unit, while $$ are not dimensionless.
- Additional calculations must be undertaken to determine the value of a SCU for each individual project.

SAAM

- Can’t put a $$ value on a SCU since each one generated may require different amounts of work.

SAAM

- No Impact Factor (minor and major impacts viewed as the same).

SAAM

- Need for a direct biological/water quality parameter. These take very little time, and will tell more about the health of the system.

SICAM

- Much more user friendly and understandable than SAAM, from field form through mitigation calculation sheet. We've been basing our mitigation plans on SICAM.

SICAM

- Currency stays in LF or multiples of LF which can be conveyed to clients, and can be assigned a $$ value, and can be put in ground for mitigation.

SICAM

- Need some type of biological/water quality. For instance, a stream with abundant EPT taxa on mitigation creeks, for preservation receives ratios from 5:1 – 15:1.

SICAM

- Direct biological / water quality will tell you the true health of the system from a watershed perspective.

- Possible solution: Additional Adjustment Factor for the presence of certain biotics (i.e. EPT taxa).

SICAM

- Preservation ratios should be changed.

SICAM

- There are a finite amount of streams which can be used for mitigation. In our experience proposed stream creations have not been approved. Therefore, there are only limited amounts of resources which can be mitigated.

SICAM

- Ratios from 5:1-20:1 seem too high. In a pristine system, one should receive more credit for preservation. One cannot engineer a system that is better than a naturally created system

SICAM

- On one project Agency input required excessive breakdown of reaches. Mitigation creeks were in our opinion optimal, with less than 20% of the total reaches being eroded. The breakdown included areas of erosion, 20-30 ft. at a time and use of separate forms. This contradicts the written methodology. SICAM is an assessment of the overall quality of the system

SICAM

- When enhancing erosional hot spots on a stream reach, and enhancing buffers in certain areas, one should get credit for the entire reach not just the "hot spots". For example, on a 500 lf stretch of stream, wherein one is enhancing 20 areas along the reach totaling 250 lf with bio-engineered stabilization measures, then you are benefiting the entire 500 lf stretch, and should receive the enhancement ratio for the entire 500 lf not 250 lf of enhancement, and 250 lf of preservation.

SICAM

- Impact factors could use some modifying.

- Currently, filling and piping receive the same IF. With piping there is still some function retained

SICAM

- When consulting with a client on changing from piping to open bottom culverts, which have different IF's, it was determined that the cost of mitigation was less than the cost for installing open bottom culverts

SUMMARY

- These techniques are implemented to quantify/standardize/expedite the stream impact/mitigation/permitting process. To date we have not seen this.

SUMMARY

- Everything is still case by case. No standardization because of perspective of individual regulator, and differences in interpreting methodologies.

SUMMARY

- Need for a direct biological component. For example wetland delineation and classification PEM, PSS, PFO.

- Need for a biological/water quality. These take very little time, and will tell more about the health of the system than any type of engineering

SUMMARY

- There is no better mitigation than PRESERVATION

- Irony is that this has all been done in the Pacific Northwest under the ESA

SUMMARY

- It is Generally Accepted that watershed restoration should focus on restoring natural processes that create and maintain habitat rather than manipulating instream habitats.
    - Roni et al 2002